1. **PERSONNEL:**

**Senior Personnel**

Dr. Thomas Shrimpton**-** Principal Investigator (PI): Funds are requested to support two months of effort for the first year, and one month of effort in years two and three. PI will oversee all aspects of the project.

The proposed salary for Dr. Shrimpton, in combination with other current NSF support, meets the two-month limit for senior personnel. The proposed level of commitment for this proposal is appropriate for the scope of work and is required in order to fulfill the objectives of this project within the proposed timeframe

**Other Personnel**

Graduate Students: Funds are requested to support two 50% full-time equivalent graduate students during the lifetime of the project. The graduate students will aid in the design and implementation of the firmware analysis framework and will assist the PIs in developing algorithms for model learning and attack finding, as well as evaluating the enforcement framework under the supervision and guidance of the PIs. Salaries for the PIs and graduate students include an annual 3% increase.

1. **FRINGE:** Fringe benefits are calculated as 27.4% for PI salary and 10.2% for graduate student salary. Fringe benefits include FICA, state unemployment, workers compensation, retirement, and life and health insurance. Fringe benefits are based on the rate settlement agreement approved by DHHS, effective July 1, 2017.
2. **TRAVEL:** Funds are requested to support domestic and foreign travel by the PI and graduate student to disseminate research data at annual conferences and meetings, including program committee meetings. Projected destinations include the IARC flagships CRYPTO (UC-Santa Barbara) and EUROCRYPT (Darmstadt, Germany in 2019; TBD after that), IEEE Symposium on Security and Privacy (San Francisco, CA), the USENIX Security Symposium (Santa Clara, CA in 2019; TBD after that), the ACM Conference on Computer and Communications Security. Cost estimates are based on historical UF travel expenses in accordance with UF travel directives (http://www.fa.ufl.edu/directives-and-procedures/travel/) and include airfare, lodging, registration, meals and local transportation expenses.
3. **MATERIALS AND SUPPLIES:** No funds are requested.
4. **OTHER:** Funds are requested for the cost of tuition for the graduate students for the duration of the project. Beginning in year two, tuition costs include an increase of 5% as mandated by university policy.
5. **INDIRECT COST:** Negotiated and determined by the Department of Health and Human Services.  The University currently has a provisional IDC rate of 52.5% of Modified Total Direct Costs for on-campus organized research – effective beginning 7/1/2016.

http://research.ufl.edu/research/pdf/FA\_Rate\_Agreement\_062292015.pdf